J. Cox.

Fire Escape.

No. 4,597. Patented Jun. 27, 1846.

Fig. 2.

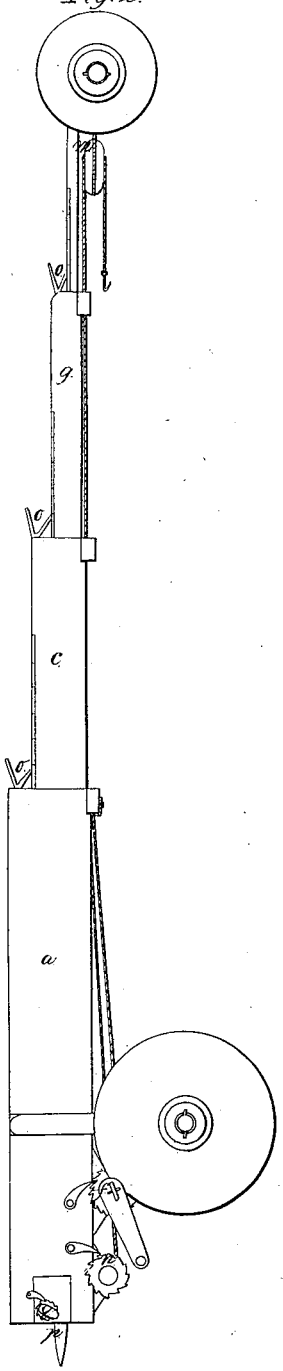


Fig. 1.

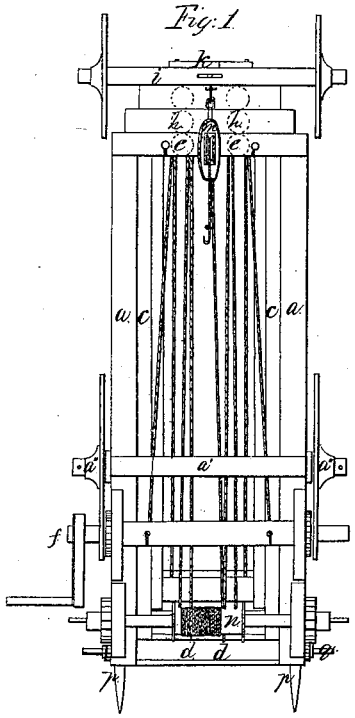
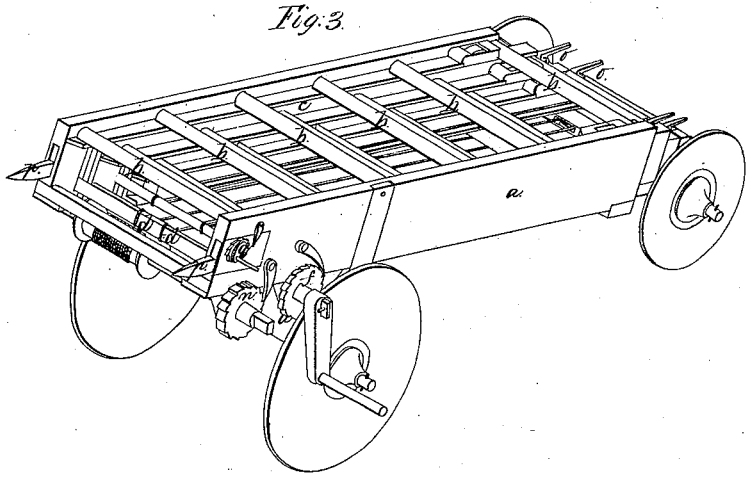


Fig. 3.



UNITED STATES PATENT OFFICE.

JAMES COX, OF BRUSH VALLEY, PENNSYLVANIA.

FIRE-ESCAPE.

Specification of Letters Patent No. 4,597, dated June 27, 1846.

To all whom it may concern:

Be it known that I, JAMES COX, of Brush Valley, in the county of Indiana and State of Pennsylvania, have invented a new and useful Improvement in Fire-Escapes, Which is Also Applicable to Painters' Ladders, and that the following is a full, clear, and exact description of the principle or character thereof, which distinguishes it from all other things before known, and of the manner of making, constructing, and using the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a back elevation; Fig. 2, a side elevation with the ladder extended; Fig. 3, an isometrical view of the apparatus packed and on its wheels, ready for transportation.

The same letters represent like parts in all the figures.

The nature of my improvement consists in arranging the different sections of the ladder and coupling them together, so that the raising of the first or lower sliding section shall cause the others to be drawn up to their places in the most expeditious manner.

In the accompanying drawings, (*a*) represents the frame or stationary section of the ladder composed of two broad side pieces, connected by rounds (*b*) near the front edge, and front of the grooves in which the first sliding section (*c*) is situated and works up and down. The section (*a*) has an axle (*a'*) affixed to it, on which a pair of wheels (*a''*) are put to transport the apparatus upon.

The second, or first movable section (*c*) is made similar to that first described in all respects, except the side pieces, which are narrower, and placed near enough together to slide in the grooves on the inside of the section (*a*) to allow this section to move up and down; easy rollers may be placed on the three sides of each groove of the side pieces (*a*) near the top; to hoist this section (*c*) a double cord (*d*) is affixed to its lowest cross bar around which passes up through pulleys (*e*, *e*) in a cross bar at the back or underside of the section (*a*) at the top and thence down to a windlass (*f*) placed near the ground, and attached to the section (*a*).

The third section (*g*) is made like the second, but narrow enough to slide in its grooves; the ropes that raise section (*g*) are attached to its lowest round and pass up over pulleys (*h*, *h*) in the top bar of section (*c*) and thence down to the bar containing pulleys (*e*, *e*). Any number of sections can in a similar manner be added and raised by cords attached in a similar way to those below. The upper section has a forward axle (*i*) attached to its upper end which can be fixed from turning by buttons (*k*) so that the wheels on this axle shall travel up the side of the building and ease the upper end off. To the upper end of the upper section a block (*m*) is attached and a windlass (*n*) operates on the rope that is reeved through it,—this is for hoisting or lowering goods, as required. Racks are made on the front face of each of the movable sections, and at the top of the stationary one, and each other one that has a section sliding in it: there is a pawl (*o*) to catch and hold them when raised without bringing the strain on the cords.

At the lower end of the lower section (*a*), there are pointed feet (*p*), one on each side piece; these are made to slide up and down in said side pieces, and are raised and lowered by means of racks and pinions (*q*), and are for the purpose of steadying and leveling the ladder on uneven ground,—a thing of great importance in the above apparatus.

Having thus fully described my improvements, I wish it to be understood that I do not claim a ladder made of sliding sections, nor do I claim mounting said sections on wheels, as these things have been done before, but

What I do claim as my invention and desire to secure by Letters Patent is—

The method of elevating the upper sections by means of cords attached to them and to the parts below, so that by raising the lower movable section by the windlass each of the sections above shall be drawn out a proportional distance in the manner and for the purpose described.

JAMES COX.

Witnesses:
A. P. BROWNE,
J. H. HELLER.